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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BAKER, STEPHEN M

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,775

Applicant(s)

ABROMISOV

Examiner

Stephen M. Baker

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

There is no section of the disclosure devoted to a brief description of the drawings. The brief description should make clear which drawings are representative of "conventional" (i.e. prior art) arrangements, and any figure devoted to "conventional" arrangements should be labeled as such in the drawings also.

On page 1, line 22: "proportion" apparently should be "portion".

On page 2, line 30: "full-frequency" apparently should be "full frequency".

On page 2, lines 30-31: "low-frequency" apparently should be "low frequency".

On page 2, lines 31-32: "a quotient of the full frequency and the number of said data transferring sections" is unclear and apparently should be "the full frequency divided by the number of said data transferring sections".

On page 3, lines 9 and 21: "full-frequency" apparently should be "full frequency".

On page 3, lines 9-10 and 21-22: "low-frequency" apparently should be "low frequency".

On page 3, lines 10-11 and 22-23: "a quotient of the full frequency and the number of said data transferring sections" is unclear and apparently should be "the full frequency divided by the number of said data transferring sections".

On page 3, line 25, "said output data are transmitted and received at said full frequency" apparently should be "said input data are transmitted and received at full frequency".

Art Unit: 2133

frequency", as line 17's "data receiver comprising a data input and data output" would be misnamed if the "data output" is not merely a received version of the "data input" to be passed by the "data receiver" to the "parallel data receiving sections".

On page 3, line 32: "resulted" apparently should be "resulting".

On page 3, line 32: "would not limit the operation of" is unclear and apparently should be "is appropriate for".

On page 4, line 9: "full-frequency" apparently should be "full frequency".

On page 4, line 10: "low-frequency" apparently should be "low frequency".

On page 4, lines 10-11: "a quotient of the full frequency and the number of said data transferring sections" is unclear and apparently should be "the full frequency divided by the number of said data transferring sections".

On page 4, line 13: "accessing" apparently should be "accessing a".

On page 4, line 21: "and is" apparently should be deleted.

On page 5, line 1, "BRIEF DESCRIPTION OR THE SEVERAL VIEWS" apparently should be "DETAILED DESCRIPTION".

On page 5, line 4: Fig. 1a is described as "conventional" yet is also described as including the test generator shown in Fig. 2, which includes a waveform generator 22 described on page 6, line 18+ as being "According to the present invention".

On page 5, line 17: "full-frequency" apparently should be "a full-frequency".

On page 5, line 17: "half-frequency" apparently should be "a half-frequency".

Appropriate correction is required.

Art Unit: 2133

2. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

On page 5, line 27: "http://" should be deleted.

Claim Objections

3. Claims 1, 7, 10, 12, 15, 18 and 19 are objected to because of the following informalities:

In claim 1: in line 7, "programmed" apparently should be "programmable", "full-frequency" apparently should be "full frequency", and "low-frequency" apparently should be "low frequency"; in line 8, "a quotient" apparently should be deleted.

In claims 7, 15 and 19: "a half" apparently should be "half".

In claim 10: in line 9, "programmed" apparently should be "programmable", "full-frequency" apparently should be "a full frequency", and "low-frequency" apparently should be "a low frequency"; in line 10, "a quotient" apparently should be deleted.

In claim 12: "accessing" apparently should be "accessing a".

In claim 18: in line 8, "programmed" apparently should be "programmable", "full-frequency" apparently should be "full frequency", and "low-frequency" apparently should be "low frequency"; in line 9, "a quotient" apparently should be deleted; in lines 12-13, "multiplexes said wide data word into multiple frequency to access DUT" apparently should be "multiplexes said wide data word into multiple frequency to access a DUT".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-12 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,138,259 to Tsuto *et al* (hereafter "Tsuto") in view of U.S. Patent No. 4,965,799 to Green *et al* (hereafter "Green").

Fig. 4 of Tsuto shows a DRAM chip testing system including a data-transmitting "data transferring apparatus having a data input and a data output" (12), a "plurality of data transferring sections operable in parallel for transferring data" (21A, 21B), and clock generator logic (14, 15) generating a "full-frequency" clock signal and a "low-frequency" clock signal, with "the low frequency being a quotient of the full frequency and the number of data transferring operations". The "low-frequency" clock signal is output from a clock/select signal generator unit (15) and has a frequency of $1/N$, where $N=2$ is the number of "data transferring sections". Tsuto's Fig. 4 also shows a "circuit for synchronizing said parallel data transferring sections" (100).

Regarding claims 1, 7 and 10, Tsuto does not describe the clock frequencies as being "programmable". Green discloses providing a memory chip testing system with a variable (i.e. programmable) frequency test clock in order to advantageously determine the maximum operating frequency of the memory chip. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to realize Tsuto's clock generator with a programmable frequency. Such a realization would have

Art Unit: 2133

been obvious because Green teaches that a variable (i.e. programmable) frequency test clock permits the maximum operating frequency of the memory chip to be advantageously determined.

Regarding claims 2-4, 9, 11, 12 and 17, Tsuto's Fig. 4 also shows a high-speed converter unit (16) serving as a "multiplexer for receiving data from said data transferring sections at said low frequency and providing output data at said high frequency", and can also be described as a "resynchronization circuit for resynchronizing data received at low frequency to a system clock signal of full frequency".

Regarding claims 5, 6 and 14, Tsuto's comparison logic (13A, 13B) also serves as a "plurality of data transferring sections" that are "data receivers".

Regarding claims 8, 16 and 20, although Tsuto teaches that "N" referred to above can be a value other than $N=2$, however Tsuto does not specifically mention $N=4$. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to implement Tsuto's testing system wherein the above-mentioned value of "N" is four. Such an implementation would have been obvious because Tsuto teaches that "N" referred to above can be a value other than $N=2$.

Further regarding claim 18, Tsuto does not specifically mention latching input and output data of Tsuto's low speed converter unit (17). Official Notice is given that the data stabilizing and retaining advantages provided by data latching were well known at the time the invention was made. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to implement Tsuto's low-

Art Unit: 2133

speed converter unit with data latching at the inputs and outputs. Such an implementation would have been obvious because the data stabilizing and retaining advantages provided by data latching were already well known.

Regarding claims 15 and 19, and further regarding claims 16 and 20, although Tsuto's tester is disclosed to be for testing of DRAMs, Tsuto does not specifically mention using the memory testing system for testing of SDRAMs or DDR SDRAMs. Official Notice is taken that SDRAMs and DDR SDRAMs were well-known types of DRAM at the time the invention was made. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply Tsuto's DRAM testing system to the testing of SDRAMs and DDR SDRAMs. Such an application would have been obvious because SDRAMs and DDR SDRAMs were already well-known types of DRAM.

Response to Arguments

6. Applicant's arguments filed 04 March 2005 have been fully considered but they are not persuasive.

Applicant's discussion of Tsuto's disclosure appears as a complete non-sequitur in the context of applicant's assertions, all consequently unsupported, regarding the suitability of Tsuto's teachings for use in the standing rejection. In contrast, the standing rejection is coherent as well as detailed and specific with regard to identifying each claimed element as it appears in the cited combination of teachings. The motivation for the combination remains clearly expressed in the rejection, yet is not addressed by

applicant's remarks. It is respectfully suggested that applicant review the rejection and the applied references once again and make a bona-fide attempt to be significantly responsive to both.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Baker whose telephone number is (571) 272-3814. The examiner can normally be reached on Monday-Friday (11:00 AM - 7:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2133

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stephen M. Baker
Primary Examiner
Art Unit 2133

smb